

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10 / 619,473

Source: \_\_\_\_\_

Date Processed by STIC: \_\_\_\_\_

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 02/16/2005

PATENT APPLICATION: US/10/619,473

TIME: 14:16:52

Input Set : N:\Crif3\RULE60\10619473.raw.txt

Output Set: N:\CRF4\02162005\J619473.raw

```

1 <110> APPLICANT: Walker, Craig
2      Shetty, Reshma
3      Olivera, Baldomero M.
4      Hooper, David
5      Jacobsen, Richard
6      Steele, Doug
7      Jones, Robert M.
8 <120> TITLE OF INVENTION: Tau-Conotoxin Peptides
9 <130> FILE REFERENCE: Tau-Conopeptides
10 <140> CURRENT APPLICATION NUMBER: US/10/619,473
11 <141> CURRENT FILING DATE: 2003-07-16
12 <150> PRIOR APPLICATION NUMBER: US/09/497,491
13 <151> PRIOR FILING DATE: 2000-02-04
14 <150> PRIOR APPLICATION NUMBER: US 60/118,642
15 <151> PRIOR FILING DATE: 1999-02-04
16 <160> NUMBER OF SEQ ID NOS: 49
17 <170> SOFTWARE: PatentIn Ver. 2.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 23
21 <212> TYPE: PRT
22 <213> ORGANISM: Artificial Sequence
23 <220> FEATURE:
24 <223> OTHER INFORMATION: Description of Artificial Sequence:Generic
25      Sequence for Tau Conopeptides
26 <220> FEATURE:
27 <221> NAME/KEY: PEPTIDE
28 <222> LOCATION: (1)..(2)
29 <223> OTHER INFORMATION: Xaa at residue 1 is Asp, Glu or gamma-carboxy-Glu
30      (Gla); Xaa at residue 2 is des-Xaa, Gln, Asn, Glu,
31      Trp (D or L), neo-Trp, halo-Trp, any unnatural
32      aromatic amino acid.
33 <220> FEATURE:
34 <221> NAME/KEY: PEPTIDE
35 <222> LOCATION: (3)..(4)
36 <223> OTHER INFORMATION: Xaa at residue 3 is des-Xaa, Gly, Ala, Asn or Gln;
37      Xaa at residue 4 is des-Xaa4,Val, Leu (D or L),
38      Ile, Ala, Gly, Glu, Gla, Asp, Ser, Thr, Phe, Trp
39      (D or L), neo-Trp, halo-Trp (D or L) or any
40 <220> FEATURE:
41 <221> NAME/KEY: PEPTIDE
42 <222> LOCATION: (4)..(7)
43 <223> OTHER INFORMATION: unnatural aromatic amino acid; Xaa at residue 7 is
44      Pro, hydroxy-Pro, Gln, Asn, Glu, Gla, Ala, Gly,

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45      Lys, Arg, Ile, Val, homoarginine, ornithine,
46      N-methyl-Lys, N,N-dimethyl-Lys,
W--> 47      N,N,N-trimethyl-Lys or
48 <220> FEATURE:
49 <221> NAME/KEY: PEPTIDE
50 <222> LOCATION: (7)..(8)
51 <223> OTHER INFORMATION: any unnatural basic amino acid; Xaa at residue 8
52      is Val, Phe, Thr, Ser, Glu, Glu, Asp, Asn, Gln,
53      Ala, Gly, Ile, Leu (D or L), Met, Pro,
54      hydroxy-Pro, Arg, homoarginine, ornithine, Lys,
W--> 55      N-methyl-Lys,
56 <220> FEATURE:
57 <221> NAME/KEY: PEPTIDE
58 <222> LOCATION: (8)..(9)
59 <223> OTHER INFORMATION: N,N,-dimethyl-Lys, N,N,N-trimethyl-Lys, any
60      unnatural basic amino acid or any unnatural
61      aromatic amino acid; Xaa at residue 9 is Val, Ile,
62      Asn, Leu (D or L), Gln, Gly, Ala, Phe, Glu, Glu,
W--> 63      Arg,
64 <220> FEATURE:
65 <221> NAME/KEY: PEPTIDE
66 <222> LOCATION: (9)..(10)
67 <223> OTHER INFORMATION: ornithine, arginine, Lys, N-methy-Lys,
68      N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any
69      unnatural basic amino acid or any unnatural
70      aromatic amino acid; Xaa at residue 10 is Ile, Leu
W--> 71      (D or L), Met, Thr,
72 <220> FEATURE:
73 <221> NAME/KEY: PEPTIDE
74 <222> LOCATION: (10)
75 <223> OTHER INFORMATION: Ser, Pro, hydroxy-Pro, Gln, Asp, Glu, Glu, Asn,
76      Arg, homoarginine, ornithine, Lys, N-methy-Lys,
77      N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, Tyr,
78      nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr,
79 <220> FEATURE:
80 <221> NAME/KEY: PEPTIDE
81 <222> LOCATION: (10)..(11)
82 <223> OTHER INFORMATION: O-phospho-Tyr, nitro-Tyr, any unnatural basic
83      amino acid, any unnatural aromatic amino acid or
84      any unnatural hydroxy containing amino acid; Xaa
85      at residue 11 is des-Xaa, Ala, Gly, Asp, Glu, Glu,
86 <220> FEATURE:
87 <221> NAME/KEY: PEPTIDE
88 <222> LOCATION: (11)
89 <223> OTHER INFORMATION: Trp (D or L), neo-Trp, halo-Trp (D or L), Lys,
90      N-methy-Lys, N,N-dimethyl-Lys,
91      N,N,N-trimethyl-Lys, Arg, homoarginine, ornithine,
92      Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,
W--> 93      O-sulpho-Tyr, O-phospho-Tyr,

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94 <220> FEATURE:
95 <221> NAME/KEY: PEPTIDE
96 <222> LOCATION: (11)..(14)
97 <223> OTHER INFORMATION: nitro-Tyr or any unnatural basic amino acid; Xaa
98     at residue 14 is des-Xaa, Ile, Leu (D or L), Val,
99     Glu, Gla, Asp, Thr, Ser, Pro, hydroxy-Pro, Trp (D
100     or L), neo-Trp, halo-Trp (D or L), Phe, any
101 <220> FEATURE:
102 <221> NAME/KEY: PEPTIDE
103 <222> LOCATION: (14)..(15)
104 <223> OTHER INFORMATION: unnatural aromatic amino acid or any unnatural
105     hydroxy containing amino acid; Xaa at residue 15
106     is des-Xaa11, Gln, Asn, Leu (D or L), Ile, Val,
107     Ala, Gly, Trp (D or L), neo-Trp, halo-Trp (D or
W--> 108     L), Arg,
109 <220> FEATURE:
110 <221> NAME/KEY: PEPTIDE
111 <222> LOCATION: (15)..(16)
112 <223> OTHER INFORMATION: homoarginine, ornithine, Lys, N-methy-Lys,
113     N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any
114     unnatural basic amino acid or any unnatural
115     aromatic amino acid; Xaa at residue 16 is des-Xaa,
W--> 116     Ala, Gly, Phe,
117 <220> FEATURE:
118 <221> NAME/KEY: PEPTIDE
119 <222> LOCATION: (16)..(17)
120 <223> OTHER INFORMATION: Trp (D or L), neo-Trp, halo-Trp (D or L) or any
121     unnatural aromatic amino acid; Xaa at residue 17
122     is des-Xaa, Glu, Gla, Asp, Phe or any unnatural
123     aromatic amino acid.
124 <220> FEATURE:
125 <221> NAME/KEY: PEPTIDE
126 <222> LOCATION: (18)..(19)
127 <223> OTHER INFORMATION: Xaa at residue 18 is des-Xaa, Ile, Val or Leu (D
128     or L); Xaa at residue 19 is des-Xaa, Thr, Ser,
129     Arg, homoarginine, ornithine, Lys, N-methy-Lys,
130     N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any
W--> 131     unnatural
132 <220> FEATURE:
133 <221> NAME/KEY: PEPTIDE
134 <222> LOCATION: (19)..(22)
135 <223> OTHER INFORMATION: basic amino acid; Xaa at residue 20 is des-Xaa,
136     Glu, Gla or Asp; Xaa at residue 21 is des-Xaa, Asn
137     or Gln; Xaa at residue 22 is des-Xaa, Asp, Glu or
138     Gla.
139 <220> FEATURE:
140 <221> NAME/KEY: PEPTIDE
141 <222> LOCATION: (23)
142 <223> OTHER INFORMATION: Xaa at residue 23 is des-Xaa, Phe or any unnatural

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143      aromatic amino acid.
144 <400> SEQUENCE: 1
W--> 145      Xaa Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa
146          1              5              10              15
147      Xaa Xaa Xaa Xaa Xaa Xaa Xaa
148          20
150 <210> SEQ ID NO: 2
151 <211> LENGTH: 11
152 <212> TYPE: PRT
153 <213> ORGANISM: Conus aulicus
154 <220> FEATURE:
155 <221> NAME/KEY: PEPTIDE
156 <222> LOCATION: (4)..(8)
157 <223> OTHER INFORMATION: Xaa at residue 4 is Pro or hydroxy-Pro; Xaa at
158      residue 8 is Tyr, nor-Tyr, mono-halo-Tyr,
159      di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or
160      nitro-Tyr.
161 <220> FEATURE:
162 <221> NAME/KEY: PEPTIDE
163 <222> LOCATION: (11)
164 <223> OTHER INFORMATION: Xaa at residue 11 is Trp (D or L), neo-Trp or
165      halo-Trp (D or L).
166 <400> SEQUENCE: 2
W--> 167      Phe Cys Cys Xaa Val Ile Arg Xaa Cys Cys Xaa
168          1              5              10
170 <210> SEQ ID NO: 3
171 <211> LENGTH: 11
172 <212> TYPE: PRT
173 <213> ORGANISM: Conus aulicus
174 <220> FEATURE:
175 <221> NAME/KEY: PEPTIDE
176 <222> LOCATION: (4)..(8)
177 <223> OTHER INFORMATION: Xaa at residue 4 is Pro or hydroxy-Pro; Xaa at
178      residue 8 is Tyr, nor-Tyr, mono-halo-Tyr,
179      di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or
180      nitro-Tyr.
181 <220> FEATURE:
182 <221> NAME/KEY: PEPTIDE
183 <222> LOCATION: (11)
184 <223> OTHER INFORMATION: Xaa at residue 11 is Trp (D or L), neo-Trp or
185      halo-Trp (D or L).
186 <400> SEQUENCE: 3
W--> 187      Phe Cys Cys Xaa Phe Ile Arg Xaa Cys Cys Xaa
188          1              5              10
190 <210> SEQ ID NO: 4
191 <211> LENGTH: 10
192 <212> TYPE: PRT
193 <213> ORGANISM: Conus textile
194 <220> FEATURE:

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Output Set: N:\CRF4\02162005\J619473.raw

```

195 <221> NAME/KEY: PEPTIDE
196 <222> LOCATION: (6)..(7)
197 <223> OTHER INFORMATION: Xaa at residue 6 is Tyr, mono-halo-Tyr,
198     di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or
199     nitro-Tyr; Xaa at residue 7 is Trp (D or L),
200     neo-Trp or halo-Trp (D or L).
201 <400> SEQUENCE: 4
W--> 202     Cys Cys Gln Thr Phe Xaa Xaa Cys Cys Gln
203         1             5             10
205 <210> SEQ ID NO: 5
206 <211> LENGTH: 13
207 <212> TYPE: PRT
208 <213> ORGANISM: Conus geographus
209 <220> FEATURE:
210 <221> NAME/KEY: PEPTIDE
211 <222> LOCATION: (1)..(3)
212 <223> OTHER INFORMATION: Xaa at residue 1 is Gln or pyro-Glu; Xaa at
213     residue 3 is Trp (D or L), neo-Trp or halo-Trp (D
214     or L); Xaa at residue 6 is Lys, N-methyl-Lys,
215     N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.
216 <220> FEATURE:
217 <221> NAME/KEY: PEPTIDE
218 <222> LOCATION: (7)
219 <223> OTHER INFORMATION: Xaa at residue 7 is Glu or gamma-carboxy-Glu.
220 <400> SEQUENCE: 5
W--> 221     Xaa Gly Xaa Cys Cys Xaa Xaa Asn Ile Ala Cys Cys Ile
222         1             5             10
224 <210> SEQ ID NO: 6
225 <211> LENGTH: 10
226 <212> TYPE: PRT
227 <213> ORGANISM: Conus quercinus
228 <400> SEQUENCE: 6
229     Gly Cys Cys Ala Arg Leu Thr Cys Cys Val
230         1             5             10
232 <210> SEQ ID NO: 7
233 <211> LENGTH: 12
234 <212> TYPE: PRT
235 <213> ORGANISM: Conus purpurascens
236 <220> FEATURE:
237 <221> NAME/KEY: PEPTIDE
238 <222> LOCATION: (5)..(6)
239 <223> OTHER INFORMATION: Xaa at residue 5 is Pro or hydroxy-Pro; Xaa at
240     residue 6 is Lys, N-methyl-Lys, N,N-dimethyl-Lys
241     or N,N,N-trimethyl-Lys.
242 <400> SEQUENCE: 7
W--> 243     Asn Gly Cys Cys Xaa Lys Gln Met Arg Cys Cys Thr
244         1             5             10
246 <210> SEQ ID NO: 8
247 <211> LENGTH: 15

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RAW SEQUENCE LISTING ERROR SUMMARY  
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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,3,4,7,8,9,10,11,14,15,16,17,18,19,20,21,22,23  
Seq#:2; Xaa Pos. 4,8,11  
Seq#:3; Xaa Pos. 4,8,11  
Seq#:4; Xaa Pos. 6,7  
Seq#:5; Xaa Pos. 1,3,6,7  
Seq#:7; Xaa Pos. 5  
Seq#:8; Xaa Pos. 2,8,10,14,15  
Seq#:9; Xaa Pos. 1,3,6,7  
Seq#:10; Xaa Pos. 1,4,7,13  
Seq#:11; Xaa Pos. 4,7,13  
Seq#:12; Xaa Pos. 14,16,17  
Seq#:15; Xaa Pos. 3  
Seq#:16; Xaa Pos. 3,5,6  
Seq#:18; Xaa Pos. 6,8,11,12,13  
Seq#:19; Xaa Pos. 5  
Seq#:20; N Pos. 529,537  
Seq#:46; N Pos. 573,580,620,631,645,659,678,691,697,705,715,719,723

## VERIFICATION SUMMARY

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Input Set : N:\Crf3\RULE60\10619473.raw.txt

Output Set: N:\CRF4\02162005\J619473.raw

L:47 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:55 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:63 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:71 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:93 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:108 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:116 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:131 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
M:341 Repeated in SeqNo=1  
L:167 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
L:187 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
L:202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
L:221 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
L:257 M:259 W: Allowed number of lines exceeded, <223> Other Information:  
L:259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
L:278 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
L:308 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
L:323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
M:341 Repeated in SeqNo=12  
L:353 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
L:401 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
L:429 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:20  
L:429 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:490  
L:959 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:46  
L:959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:548  
M:341 Repeated in SeqNo=46